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Data Paper

# Macromycetes of the National Botanical Garden of Georgia: Revised data

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## Abstract

The data presented here cover all the macromycete species recorded from the National Botanical Garden of Georgia from the beginning of the 20th century to the present day. This is the first time a list of macromycetes from the National Botanical Garden of Georgia has been compiled; it totals 126 species, along with their ecological and trophic characteristics, collection date, and sources (herbarium, literature). Five species records from collections made between 2021–2024 are new to the Georgian mycobiota.

**Key words:** Botanical Garden, Macromycetes, New records

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## Introduction

In 1909, a mycological cabinet was established as a part of the National Botanical Garden of Georgia (NBGG), dedicated to the studying fungal pathogens of agricultural plants (Narodnyy komissariat zemledeliya 1931; Nakhutsrishvili 1986). Following this, the earliest macromycete specimens collected within the NBGG date back to 1913–1915. However, to date, a comprehensive mycological study has not been conducted within the NBGG. Instead, data on herbarium specimens of the NBGG macromycetes are scattered in various literature sources (Voronov 1915; Voronikhin 1915; Voronikhin 1916; Voronov 1922; Voronikhin 1927; Bondarzew 1953; Nakhutsrishvili 1972; Nakhutsrishvili 1975; Gulmagarashvili 1976; Gulmagarashvili 1978; Melik-Khachatrian et al. 1985; Nakhutsrishvili 1986; Ghobad-Nejhad et al. 2009; Jorjadze et al. 2022) and in herbarium collections (TBI; TGM). Our goal in this study, is to unify available earlier and recent data and make a comprehensive list of the macromycetes recorded in the NBGG.

### Study area

The NBGG is situated in the southeastern part of Tbilisi (Fig. 1). It occupies the lower reaches of the Tsavkisistskali Gorge (a right tributary of the Mtkvari River). On the left bank are the slopes of the Sololaki Ridge, and on the right bank are the slopes of the Tabori Ridge. Both are southeastern spurs of the Trialeti Range, which is part of the Lesser Caucasus Mountain system. The highest elevation is 662 m, and the lowest is 435 m a.s.l. The climate is dry continental,

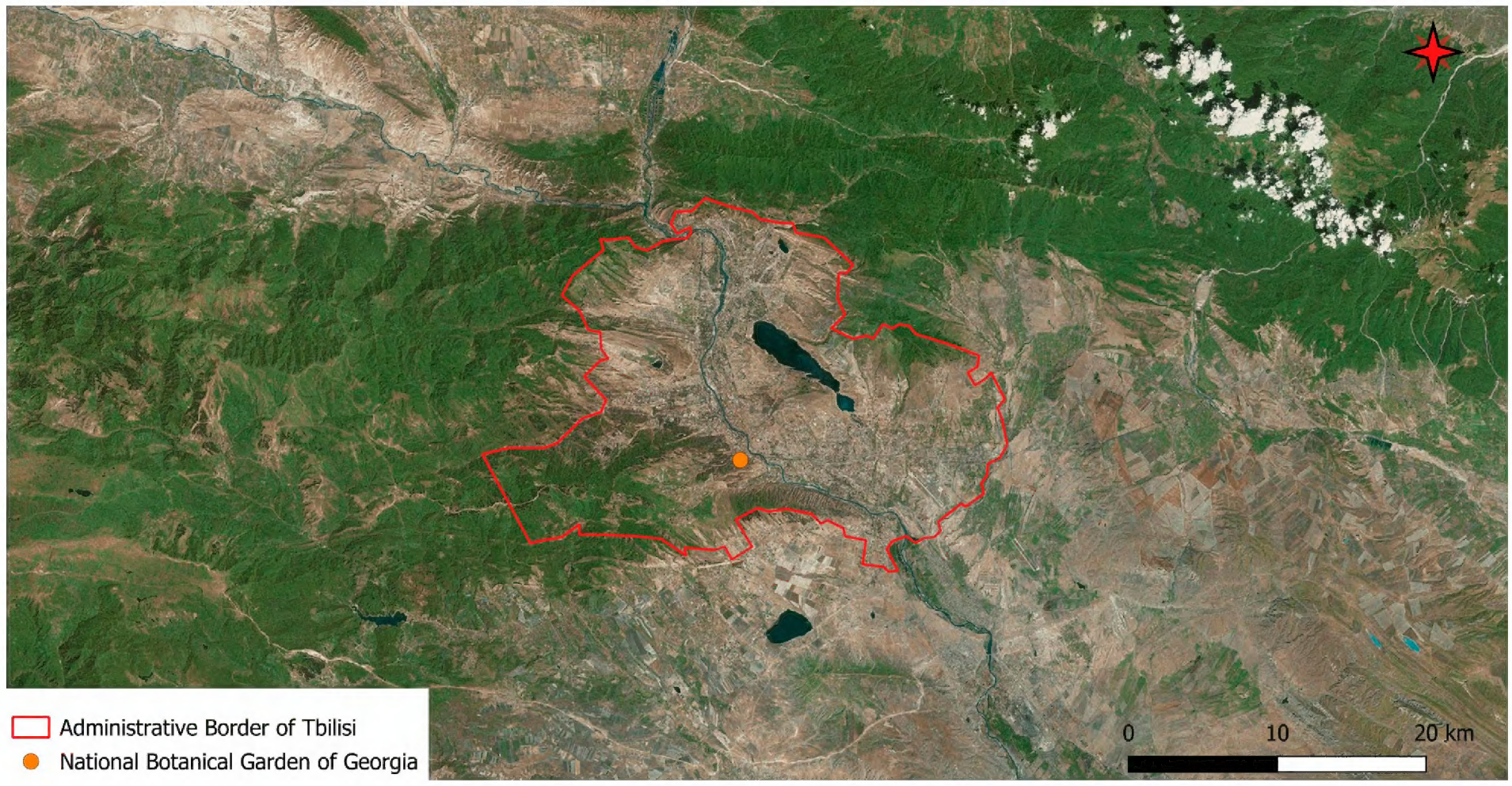



**Figure 1.** Location of NBGG in Tbilisi.

with hot and dry summers and mild winters. The annual average temperature is 13°C, and the average annual precipitation is 518 mm. The terrain is mostly rocky with poor soil cover. Natural vegetation in and around the NBGG is typical of the eastern part of the Trialeti Range (Maruashvili 1970; Gagnidze et al. 1987; Kvachakidze 2010) and is dominated by hemi-xerophyllous shrubs: *Spiraea hypericifolia* L., *Atraphaxis caucasica* (Hoffm.) Pavlov, and *Paliurus spina-christi* Mill. There are fragments of arid open woodlands, mainly characterized by *Celtis caucasica* Willd., areas of steppe with *Stipa capillata* L., and sparsely vegetated dry rocky outcrops. Non-native species such as *Fraxinus ornus* L. and *Ailanthus altissima* (Mill.) Swingle are naturalized in the semi-arid habitats.

The total area of the NBGG is about 128 ha and contains collection plots of Himalayan, East Asian, North American, Mediterranean, and West Georgian vegetation. It also includes East Georgian trees and shrubs, pines, conifers, cedars, rare and endangered Caucasian plants, lilacs, herbaceous ornamental plants, and medicinal plants,. Other features include an ethnobotanical display, plant conservation plot, historical arboretum, Cypress Alley, Bamboo Groove, Rose Garden, and the Garden of Cultivars.

The NBGG area was used for ornamental plant cultivation during monarchical times, 300-350 years ago. According to historical sources, there were three smaller gardens within the territory of the modern NBGG, owned by the Royal Family in the 17th-18th centuries (Bagrationi 1735). After the Russian conquest of the Georgian Kingdom in 1801, the Royal Garden was renamed the Treasury Garden of Tbilisi. From 1845, it became known as the Tbilisi Botanical Garden. Its official name today is the National Botanical Garden of Georgia.

## Materials and methods

The macromycete specimens were collected opportunistically from various habitats within the NBGG during the non-winter seasons of 2021-2024. During

field surveys, the fruit bodies, habitat, and substrate were recorded and described, specimens were photographed using Sony Cyber-shot DSC-HX400 and Nikon Coolpix L830 cameras. Microscopic characteristics were examined using an OLYMPUS CX31 light microscope, Celestron 5MP Digital Microscope Imager and Celestron Digital Imager HD Windows App (https://www.celestron.com/). KOH (5%) solution was used as the mounting medium, and KOH (5%) and $NH_3$ for colour reactions. Species identification was undertaken using sources by Bondartsev (1953), Melik-Khachatrian et al. (1985), and Læssøe and Petersen (2019).

We examined old literature records and herbarium collections; the herbarium specimens we list are stored at the Herbarium of the Department of Fungi and Spore-bearing Plants, Institute of Botany, Ilia State University (TBI). We did not revise the taxonomic validity of earlier collections of herbarium specimens. Species nomenclature follows Index Fungorum (www.indexfungorum.org).

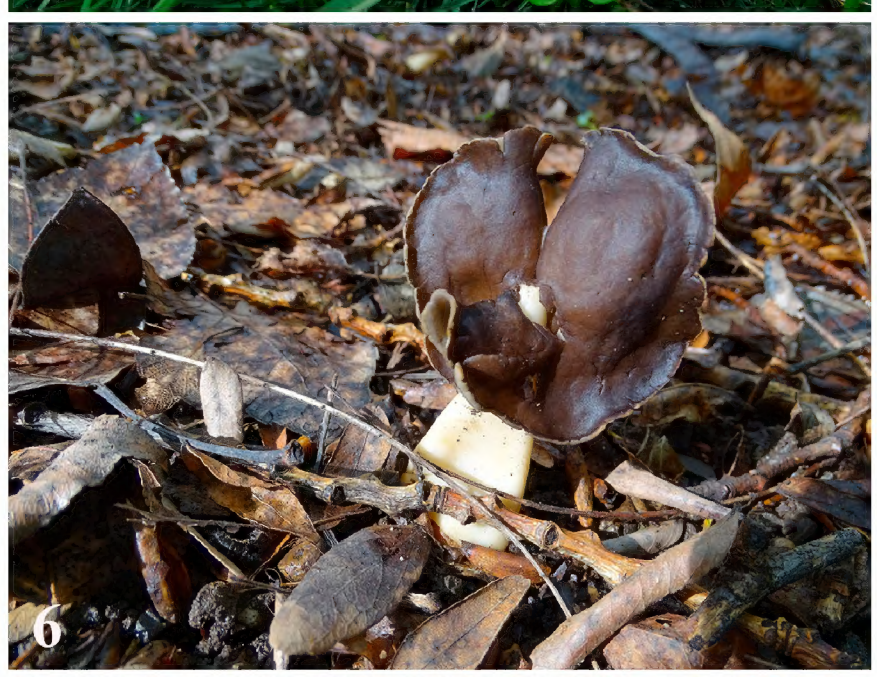
### Abbreviations

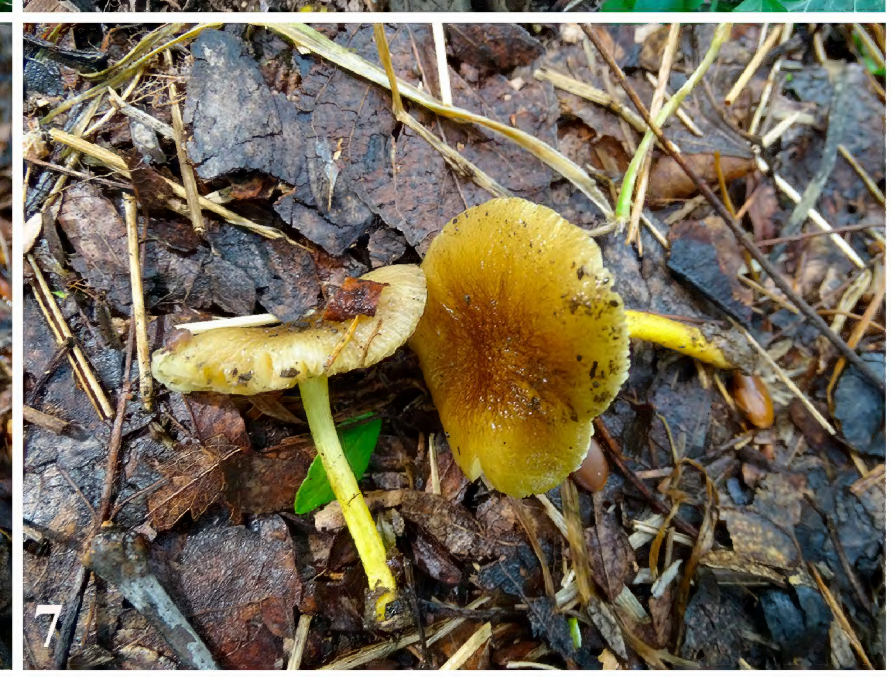
**KOH:** Potassium hydroxide;
**$NH_3$:** Ammonia solution;
**NBGG:** National Botanical Garden of Georgia;
**TBI:** Institute of Botany, Ilia State University, Tbilisi, Georgia;
**TGM:** Georgian National Museum, Tbilisi, Georgia.

## Results and discussion

Fifty-five species were recorded from the NBGG during the 2021–2024 surveys; five of these are new records to the Georgian mycobiota: *Lepiota pseudolilacea* Huijsman, *Melanoleuca exscissa* (Fr.) Singer, *Psilocybe coronilla* (Bull.) Noordel., *Entoloma politum* (Pers.) Noordel., and *Gymnopus impudicus* (Fr.) Antonín, Halling & Noordel. (Table 1; Figures 2–3). The total number of macromycete species now known from the NBGG is 126. This includes species recorded during the 2021–2024 surveys, as well as species known from literature and earlier collections (Table 1; Figures 4–11). The table provides all recorded spe-

**Figures 2–3. 2:** *Gymnopus impudicus*; **3:** *Entoloma politum*.



**Figures 4–11. 4:** *Collybia personata*; **5:** *Scleroderma cepa*; **6:** *Helvella monachella*; **7:** *Pluteus romellii*; **8:** *Ganoderma australe*; **9:** *Inocybe asterospora*; **10:** *Coriolopsis gallica*; **11:** *Agrocybe praecox*.

cies along with their current names, families, habitats, substrates, collection dates, storage locations, and literature sources.

Of the 126 species, 12% belong to the phylum Ascomycota and 88% to Basidiomycota. In terms of trophic function, 66% of the species are saprotrophic—of these, 47.6% are associated with soil, detritus, or plant debris, and 19% are deadwood-associated. Additionally, 12.7% are wood decomposers, including possible parasites; 16.7% are mycorrhiza-forming; 0.8% are parasites; and 2.4% have undetermined ecology (saprotrophic or mycorrhizal).

**Table 1.** List of species recorded in the territory the NBGG.

| Species | Family | Habitat / Substrate | Date of collection | Herbarum | References |
|---|---|---|---|---|---|
| **Ascomycota** | | | | | |
| *Pezicula carpinea* (Pers.) Sacc. | Dermateaceae | *Carpinus* sp. (bark).; on bark of *Fagus*, *Carpinus*, *Rosa* | 28.03.1964 | TGM | Nakhutsrishvili 1986 |
| *Diatrype stigma* (Hoffm.) Fr. | Diatrypaceae | *Crataegus* sp. (twig) | 18.10.2000 | TGM | Jorjadze et al. 2022 |
| *Eutypella velata* (Rehm) Rappaz | Diatrypaceae | On dead branches | | | Voronov 1922 |
| *Helvella acetabulum* (L.) Quél. | Helvellaceae | On soil | 13.05.1952 | TBI | Jorjadze et al. 2022 |
| *Helvella monachella* (Scop.) Fr. | Helvellaceae | Riparian forest | 01.05.2023 | TBI | |
| *Daldinia concentrica* (Bolton) Ces. & De Not. | Hypoxylaceae | *Ailanthus altissima* (stem) | 18.01.2001 | TGM | Jorjadze et al. 2022 |
| *Legaliana badia* (Pers.) Van Vooren | Pezizaceae | | 04.05.1955; 09.08.1958 | TGM | Jorjadze et al. 2022 |
| *Peziza depressa* Pers. | Pezizaceae | On rotten branches, manure | | | Voronov 1915 |
| *Geopora arenosa* (Fuckel) S. Ahmad | Pyronemataceae | On soil | 14.06.2007 | TBI | Jorjadze et al. 2022 |
| *Geopora sumneriana* (Cooke ex W. Phillips) M. Torre | Pyronemataceae | Forest | 04.05.2007 | TBI | Jorjadze et al. 2022 |
| *Therrya pini* (Alb. & Schwein.) Höhn. | Rhytismataceae | On *Pinus* sp. | | | Nakhutsrishvili 1986 |
| *Urnula craterium* (Schwein.) Fr. | Sarcosomataceae | On soil | | | Nakhutsrishvili 1986 |
| *Ustulina vulgaris* Tul. & C. Tul. | Xylariaceae | Deciduous forest, on stump | 04.05.2007 | TBI | Jorjadze et al. 2022 |
| *Xylaria longipes* Nitschke | Xylariaceae | On stump of deciduous tree | 14.06.2007 | TBI | Jorjadze et al. 2022 |
| *Xylaria polymorpha* (Pers.) Grev. | Xylariaceae | On stump of deciduous tree; on rotting stump | 25.10.2006; 14.06.2007 | TBI | Jorjadze et al. 2022 |
| **Basidiomycota** | | | | | |
| *Agaricus arvensis* Schaeff. | Agaricaceae | Meadow, among grasses, on soil | 10.05.2023 | TBI | |
| *Agaricus campestris* L. | Agaricaceae | On soil | 15.10.1955 | TBI | Jorjadze et al. 2022 |
| *Battarrea phalloides* (Dicks.) Pers. | Agaricaceae | On soil, near *Cedrus* sp.; on soil, near *Cupressus* sp.; on soil, near *Pinus* sp.; on soil, alley of *Cupressus sempervirens* | 05.03.2007; 09.06.2010; 13.09.2012; 19.06.2023 | TBI | Jorjadze et al. 2022 |
| *Coprinus comatus* (O.F. Müll.) Pers. | Agaricaceae | On soil, among leaves | 29.03.2023 | TBI | |
| *Cyathus olla* (Batsch) Pers. | Agaricaceae | On fallen branches; on soil; on *Cedrus* sp. cones | 29.08.2002; 05.10.2006 | TBI | Jorjadze et al. 2022 |

| Species | Family | Habitat / Substrate | Date of collection | Herbarum | References |
|---|---|---|---|---|---|
| *Cyathus striatus* Willd. | Agaricaceae | On wood; on rotting wood | 04.05.1955; 06.10.1915 | TBI | Jorjadze et al. 2022 |
| *Lepiota boudieri* Bres. | Agaricaceae | Near *Quercus* sp. | 13.10.1954 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Lepiota cristata* (Bolton) P. Kumm. | Agaricaceae | On soil, near *Cupressus* sp.; river bank, on soil, among grasses | 24.10.1989; 29.05.2023 | TBI | Jorjadze et al. 2022 |
| *Lepiota erminea* (Fr.) P. Kumm. | Agaricaceae | On soil; at forest edge, in park, on meadow | 13.10.1958; 18.09.2023 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Lepiota felina* (Pers.) P. Karst. | Agaricaceae | On soil; forest | 17.06.1955; 04.10.1958 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Lepiota pseudolilacea* Huijsman | Agaricaceae | Meadow, on soil | 15.09.2023 | TBI | Jorjadze et al. 2022 |
| *Lepiota rufovelutina* Velen. | Agaricaceae | Forest | 15.09.1951 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Leucocoprinus leucothites* (Vittad.) Redhead | Agaricaceae | On soil; *Cedrus deodara* plantation, on soil; Stony meadow, under *Celtis* and *Cercis* | 13.10.1954; 15.10.1955; 10.05.2023; 15.09.2023 | TBI | Jorjadze et al. 2022 |
| *Leucocybe candicans* (Pers.) Vizzini, P. Alvarado, G. Moreno & Consiglio | Agaricaceae | On needles | 15.10.1955 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Macrolepiota excoriata* (Schaeff.) Wasser | Agaricaceae | On soil | 02.10.1966; 10.10.2023 | TBI | Jorjadze et al. 2022 |
| *Melanoleuca exscissa* (Fr.) Singer | Agaricaceae | On soil, among grasses | 20.10.2023 | TBI | |
| *Tricholomopsis rutilans* (Schaeff.) Singer | Agaricaceae | On stump of *Pinus* sp. | 07.05.2019 | TBI | Jorjadze et al. 2022 |
| *Tulostoma brumale* Pers. | Agaricaceae | On soil, among mosses; on soil | 10.03.1964; 20.06.2019 | TBI | Jorjadze et al. 2022 |
| *Tulostoma fimbriatum* Fr. | Agaricaceae | Meadow, on soil | 14.05.2019 | TBI | Jorjadze et al. 2022 |
| *Tulostoma squamosum* (J. F. Gmel.) Pers. | Agaricaceae | On soil, near *Juniperus* sp.; on soil, near *Picea* sp.; Soil; on soil, among mosses; on soil, among mosses; on soil | 27.10.1955; 10.05.1999; 12.10.2014; 03.04.2015; 20.10.2023 | TBI | Nakhutsrishvili 1974 |
| *Athelia teutoburgensis* (Brinkmann) Jülich | Atheliaceae | On bark of *Cercis siliquastrum* | 07.04.1978 | TBI | Gulmagarashvili 1978; Jorjadze et ai. 2022 |
| *Auricularia mesenterica* (Dicks.) Pers. | Auriculariaceae | On deciduous tree (stump); Stump | 25.10.2006; 12.03.2007; 03.05.2015 | TBI | Jorjadze et al. 2022 |
| *Conocybe tenera* (Schaeff.) Kühner | Bolbitiaceae | Meadow, on soil | 19.09.2023 | TBI | |
| *Caloboletus radicans* (Pers.) Vizzini | Boletaceae | Near *Quercus castaneifolia*, on soil | 18.09.2023 | TBI | |
| *Suillellus luridus* (Schaeff.) Murrill | Boletaceae | Under *Quercus*, on soil | 18.09.2023 | TBI | |
| *Cerrena unicolor* (Bull.) Murrill | Cerrenaceae | On stump; on the dead deciduous tree | 29.09.1938; 06.01.1915, 15.09.2023 | TBI | Jorjadze et al. 2022 |
| *Clavariadelphus ligula* (Schaeff.) Donk | Clavariadelphaceae | On a conifer tree | 15.07.1972 | | Gulmagarashvili 1976 |
| *Collybia nuda* (Bull.) Z.M. He & Zhu L. Yang | Clitocybaceae | Forest; on soil | 18.05.1994; 22.05.1959 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Collybia personata* (Fr.) Z.M. He & Zhu L. Yang | Clitocybaceae | Meadow, among grasses | 29.03.2023 | TBI | |
| *Collybia rivulosa* (Pers.) Z.M. He & Zhu L. Yang | Clitocybaceae | On soil | 23.10.2023 | TBI | |

| Species | Family | Habitat / Substrate | Date of collection | Herbarum | References |
|---|---|---|---|---|---|
| *Astraeus hygrometricus* (Pers.) Morgan | Diplocystidiaceae | On soil; near *Juglans nigra*, on soil | 07.05.1959; 15.04.1960; 04.05.2007; 20.10.2023 | TBI | Jorjadze et al. 2022 |
| *Clitopilus prunulus* (Scop.) P. Kumm | Entolomataceae | Deciduous forest, on soil; Litterfall | 15.10.1955 | TBI | Jorjadze et al. 2022 |
| *Entoloma politum* (Pers.) Noordel. | Entolomataceae | Riparian forest, soil | 01.05.2023 | TBI | |
| *Geastrum fornicatum* (Huds.) Hook. | Geastraceae | On soil, near *Pinus* sp. (soil); on soil, under *Thuja* sp. | 12.10.2014; 20.10.2023 | TBI | Jorjadze et al. 2022 |
| *Geastrum kotlabae* V.J. Staněk | Geastraceae | On soil | 14.06.2007 | TBI | Jorjadze et al. 2022 |
| *Geastrum striatum* DC. | Geastraceae | On soil, near *Acer* sp.; on soil, near *Taxus baccata*; on soil, near *Cedrus* sp. | 01.07.2002; 03.04.2015; 20.03.2019 | TBI | Jorjadze et al. 2022 |
| *Myriostoma coliforme* (Dicks.) Corda. | Geastraceae | On soil, near deciduous tree; *Cedrus deodara* plantation | 06.05.2008; 15.09.2023 | TBI | Jorjadze et al. 2022 |
| *Gloeophyllum trabeum* (Pers.) Murrill | Gloeophyllaceae | On dead deciduous tree, on log | 28.12.022 | TBI | |
| *Gliophorus psittacinus* (Schaeff.) Herink | Hygrophoraceae | | 16.09.1970 | TBI | Jorjadze et al. 2022 |
| *Fomitiporia robusta* (P. Karst.) Fiasson & Niemelä | Hymenochaetaceae | On *Spiraea crenata* | 10.05.1975 | | Gulmagarashvili 1976 |
| *Fuscoporia contigua* (Pers.) G. Cunn. | Hymenochaetaceae | On *Tilia caucasica*; on *Tilia* sp. and *Hippophae* sp. | 20.09.1938 | | Voronikhin 1927; Gulmagarashvili 1976 |
| *Fuscoporia torulosa* (Pers.) T. Wagner & M. Fisch | Hymenochaetaceae | On *Cedrus* sp. | 20.05.2023 | TBI | |
| *Inocutis dryophila* (Berk.) Fiasson & Niemelä | Hymenochaetaceae | On *Fraxinus* sp. | 25.09.2024 | TBI | |
| *Inocutis rheades* (Pers.) Fiasson & Niemelä | Hymenochaetaceae | On dead wooden log | 10.11.2023 | TBI | Jorjadze et al. 2022 |
| *Inocutis tamaricis* (Pat.) Fiasson & Niemelä | Hymenochaetaceae | On *Tamarix ramossima* | 19.09.1938 | | Voronikhin 1927; Gulmagarashvili 1976 |
| *Inonotus hispidus* (Bull.) P. Karst. | Hymenochaetaceae | On live *Morus* stem | 19.12.2022 | TBI | |
| *Phellinus erectus* A. David, Dequatre & Fiasson | Hymenochaetaceae | On root *Quercus* sp. | 28.04.1988 | TBI | Jorjadze et al. 2022 |
| *Phylloporia ribis* (Schumach.) Ryvarden | Hymenochaetaceae | On *Rosa* sp.; *Berberis* sp. (stem); *Ptelea trifoliata*, on stump; *Berberis* sp. (stem); *Ephedra procera* | 24.09.1938; 02.10.1938; 27.01.1989; 15.09.2023 | TBI | Voronov 1915; Jorjadze et el. 2022 |
| *Flammula alnicola* (Fr.) P. Kumm. | Hymenogastraceae | Group of trees, on stems and around; *Ulmus* sp., on fallen trunk | 14.12.1914 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Naucoria escharioides* (Fr.) P. Kumm. | Hymenogastraceae | Roadside, pasture | | | Nakhutsrishvili 1975 |
| *Naucoria melinoides* (Bull.) P. Kumm. | Hymenogastraceae | Among mosses | 27.12.1968 | TBI | Jorjadze et al. 2022 |
| *Psilocybe coronilla* (Bull.) Noordel. | Hymenogastraceae | On soil | 18.09.2023 | TBI | |
| *Melanoleuca grammopodia* (Bull.) Murrill | Incertae sedis | Riparian forest, on soil | 29.03.2023 | TBI | |
| *Inocybe asterospora* Quél. | Inocybaceae | On soil near *Quercus* sp.; forest | 30.05.1955; 16.07.1955 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Inocybe geophylla* P. Kumm. | Inocybaceae | | 28.09.1968 | TBI | Jorjadze et al. 2022 |

| Species | Family | Habitat / Substrate | Date of collection | Herbarum | References |
|---|---|---|---|---|---|
| *Byssomerulius corium* (Pers.) Parmasto | Irpicaceae | On dead twigs of *Carpinus betulus* | | | Voronikhin 1927 |
| *Irpex lacteus* (Fr.) Fr. | Irpicaceae | On stump | 30.09.1938; 14.12.1912 | TBI | Jorjadze et al. 2022 |
| *Laetiporus sulphureus* (Bull.) Murril | Laetiporaceae | On wood | 10.11.2023 | TBI | Jorjadze et al. 2022 |
| *Bovista aestivalis* (Bonord.) Demoulin | Lycoperdaceae | On soil, near *Cedrus* sp. | 05.06.2006 | TBI | Jorjadze et al. 2022 |
| *Bovista nigrescens* Pers. | Lycoperdaceae | Meadow, on soil | 10.05.1970 | TBI | Jorjadze et al. 2022 |
| *Bovista pusilla* (Batsch) Pers. | Lycoperdaceae | Dry rocky slope, among grasses and mosses | 19.09.2023 | TBI | |
| *Marasmius epiphyllus* (Pers.) Fr. | Marasmiaceae | On dead small branches, detritus, near *Paliurus*, *Syringa*, *Hedera* | 20.10.2023 | TBI | |
| *Marasmius oreades* (Bolton) Fr. | Marasmiaceae | Meadow, on soil; meadow, among grass, near *Quercus ilex*; meadow, among grasses | 03.05.2023; 18.09.2023 | TBI | Jorjadze et al. 2022 |
| *Marasmius wynneae* Berk. & Broome | Marasmiaceae | *Cedrus deodara* plantation, on soil, litter | 18.09.2023 | TBI | |
| *Morchella esculenta* (L.) Pers. | Morchellaceae | Forest, on soil | | | Nakhutsrishvili 1986 |
| *Gymnopus dryophilus* (Bull.) Murrill | Omphalotaceae | On *Acer* sp. stem; *Cedrus deodara* plantation, on soil | 11.05.1959; 18.09.2023 | TBI | Jorjadze et al. 2022 |
| *Gymnopus impudicus* (Fr.) Antonín, Halling & Noordel. | Omphalotaceae | On soil, litter | 22.05.2023 | TBI | |
| *Marasmiellus candidus* (Fr.) Singer | Omphalotaceae | On grass litter | 20.10.2023 | TBI | |
| *Panus rudis* Fr. | Panaceae | On stump of *Acacia* sp. | 12.06.1961 | TBI | Jorjadze et al. 2022 |
| *Clathrus ruber* P. Micheli ex Pers. | Phallaceae | Forest; meadow, on soil | 18.10.1958; 10.05.2015 | TBI | Jorjadze et al. 2022 |
| *Phallus hadriani* Vent. | Phallaceae | On soil, near *Cedrus* sp. | 01.08.1913; 18.10.1958; 19.07.1990 | TBI | Voronikhin 1916; Jorjadze et ell. 2022 |
| *Desarmillaria tabescens* (Scop.) R.A. Koch & Aime | Physalacriaceae | On stumps and roots of dead hardwood, mostly *Quercus* | | | Nakhutsrishvili 1975 |
| *Flammulina velutipes* (Curtis) Singer | Physalacriaceae | On *Salix* sp. stem; on *Populus* sp.; on *Populus* sp.; on stump of deciduous tree | 14.12.1914; 17.06.1952; 20.03.1954; 28.12.2022 | TBI | Jorjadze et al. 2022 |
| *Hymenopellis radicata* (Relhan) R.H. Petersen | Physalacriaceae | On stem of *Carpinus* sp. | 04.05.1955 | TBI | Jorjadze et al. 2022 |
| *Pleurotus ostreatus* (Jacq.) P. Kumm. | Pleurotaceae | On *Ulmus montana* fallen trunk; on dead wood of *U. montana*; on *Salix* sp. stem | 14.12.1914 | | Voronikhin, 1916 |
| *Pluteus nanus* (Pers.) P. Kumm. | Pluteaceae | Riparian forest, on litter, soil | 01.05.2023 | TBI | |
| *Pluteus romellii* (Britzelm.) Lapl. | Pluteaceae | Riparian forest, on litter, soil | 01.05.2023 | TBI | |
| *Volvariella hypopithys* (Fr.) Shaffer | Pluteaceae | On soil | 20.08.1955 | TBI | Jorjadze et al. 2022 |
| *Volvopluteus gloiocephalus* (DC.) Vizzini, Contu & Justo | Pluteaceae | Meadow, on soil; on soil | 03.05.2023; 16.10.2023 | TBI | |
| *Fomes fomentarius* (L.) Fr. | Polyporaceae | On *Platanus* sp. | 05.05.2023 | | |
| *Cerioporus squamosus* (Huds.) Quél. | Polyporaceae | On dead deciduous tree | 15.09.2023 | TBI | Jorjadze et al. 2022 |
| *Coriolopsis gallica* (Fr.) Ryvarden | Polyporaceae | On dead deciduous tree; On branches | 28.04.2023 | TBI | |

| Species | Family | Habitat / Substrate | Date of collection | Herbarum | References |
|---|---|---|---|---|---|
| *Ganoderma australe* (Fr.) Pat. | Polyporaceae | On log of *Cercis siliquastrum* | 28.12.2022 | TBI | |
| *Lentinus arcularius* (Batsch) Zmitr. | Polyporaceae | On dead twigs; on dead twigs of *Celtis caucasica*; on rotten stem and twigs of deciduous tree | 22.09.1938; 23.03.2023; 25.05.2023 | TBI | Jorjadze et al. 2022 |
| *Pyrofomes demidoffii* (Lév.) Kotl. & Pouzar | Polyporaceae | On *Juniperus* sp. | 20.01.1989 | TBI | Jorjadze et al. 2022 |
| *Trametes hirsuta* (Wulfen) Lloyd | Polyporaceae | On dead wood of *Celtis caucasica* | 25.05.2023 | TBI | |
| *Candolleomyces candolleanus* (Fr.) D. Wächt. & A. Melzer | Psathyrellaceae | *Prunus cerasiféra*; on rotting wood | 06.05.1959; 19.04.1966 | TBI | Jorjadze et al. 2022 |
| *Coprinellus micaceus* (Bull.) Vilgalys, Hopple & Jacq. Johnson | Psathyrellaceae | On *Fagus orientalis* trunk; on rotting wood; on litter; on soil; on dead wood of *Populus nigra*; on rotten log | 07.05.1952; 1953; 1959; 1996; 05.2023; 09.2023 | TBI | Jorjadze et al. 2022 |
| Coprinopsis atramentaria (Bull.) Redhead, Vilgalys & Moncalvo | Psathyrellaceae | Riparian forest, on litter, soil | 29.03.2023 | TBI | |
| Psathyrella corrugis (Pers.) Konrad & Maubl. | Psathyrellaceae | On soil, Rhododendron sp.; Garden, on stumps; Meadow, on litter | 04.05.1959; 23.09.2023 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Tulosesus ephemerus* (Bull.) D. Wächt. & A. Melzer | Psathyrellaceae | | 11.05.1959 | TBI | Jorjadze et al. 2022 |
| *Rhizopogon roseolus* (Corda) Th. Fr. | Rhizopogonaceae | On soil, near *Cedrus* sp. | 25.10.2006 | TBI | Jorjadze et al. 2022 |
| *Russula xerampelina* (Schaeff.) Fr. | Russulaceae | Pine forest, on soil | 03.10.1967 | TBI | Jorjadze et al. 2022 |
| *Schizophyllum commune* Fr. | Schizophyllaceae | On dead wood of deciduous tree; on stump | 14.12.1914; 15.11.1915; 1990; 1999; 2000; 2001; 2022; 2023 | TGM; TBI | Jorjadze et al. 2022 |
| *Schizopora paradoxa* (Schrad.) Donk | Schizoporaceae | On dead twig of deciduous tree | 01.05.2023 | TBI | |
| *Pisolithus arenarius* Alb. & Schwein. | Sclerodermataceae | On soil; on soil, near *Pinus* sp. | 01.10.1913; 10.05.1953 | TBI | Voronikhin 1915; Jorjadze et el. 2022 |
| *Scleroderma aurantiacum* Pers. ex Sacc. | Sclerodermataceae | On soil | 04.09.1954; 18.06.1998 | TBI | Jorjadze et al. 2022 |
| *Scleroderma cepa* Pers. | Sclerodermataceae | Artificial plantation of various tree sprcies, on soil | 04.10.1965; 16.06.2023; 18.09.2023 | TBI | Jorjadze et al. 2022 |
| *Scleroderma citrinum* Pers. | Sclerodermataceae | On soil | 04.10.1958 | TBI | Jorjadze et al. 2022 |
| *Scleroderma verrucosum* (Bull.) Pers. | Sclerodermataceae | On soil | 20.10.2023 | TBI | |
| *Serpula lacrymans* (Wulfen) J. Schröt. | Serpulaceae | On soil | 03.10.1938; 15.05.1978 | TBI | Jorjadze et al. 2022 |
| *Stereum hirsutum* (Willd.) Pers. | Stereaceae | On twig of *Celtis caucasica*; on Plantae indet. trunk; on twig of *Celtis caucasica*; on of *Corylus avellana* stem; on stem of *Prunus laurocerasus* | 04.10.1938; 14.12.2000; 12.01.2001 | TGM | Jorjadze et al. 2022 |
| *Agrocybe dura* (Bolton) Singer | Strophariaceae | Garden, roadside, on soil; Riparian forest, on soil | 17.06.1950; 01.05.2023 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |

| Species | Family | Habitat / Substrate | Date of collection | Herbarum | References |
|---|---|---|---|---|---|
| *Agrocybe praecox* (Pers.) Fayod | Strophariaceae | On soil, near *Spiraea hypericifolia*; on soil, near *Cedrus* sp.; on soil, *Carpinus* sp.; on litter, soil, among grasses | 06.05.1959; 22.05.1980 18.05.1994; 30.05.1953; 04.05.1955; 29.05.2023 | TBI | Jorjadze et al. 2022 |
| *Hypholoma fasciculare* (Huds.) P. Kumm. | Strophariaceae | On rotting wood | 18.10.1958 | TBI | Jorjadze et al. 2022 |
| *Pholiota populnea* (Pers.) Kuyper & Tjall.-Beuk. | Strophariaceae | On *Populus canadensis* deadwood; on *Populus* sp. log | 04.11.1986; 02.10.1964 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Suillus granulatus* (L.) Roussel | Suillaceae | *Pinus eldarica* plantation, on soil | 11.10.1957 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Dermoloma cuneifolium* (Fr.) Singer ex Bon | Tricholomataceae | On soil, near *Acer* sp. | 14.05.1952 | TBI | Jorjadze et al. 2022 |
| *Tricholoma orirubens* Quél. | Tricholomataceae | Forest, among grasses | 18.11.1959 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |
| *Tricholoma terreum* (Schaeff.) P. Kumm. | Tricholomataceae | Pine forest | 21.10.1958 | TBI | Jorjadze et al. 2022 |
| *Cyclocybe erebia* (Fr.) Vizzini & Matheny | Tubariaceae | Forest edge, garden, on *Wisteria* sp. root, near stumps | 15.09.1955 | TBI | Nakhutsrishvili 1975; Jorjadze et el. 2022 |

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### Author contributions

All authors contributed equally.

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### Data availability

All of the data that support the findings of this study are available in the main text or Supplementary Information.

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